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NRO REVIEW COMPLETED

MEMORANDUM FOR: Director, National Reconnaissance Office
SUBJECT : Revised FY 1964 Requirements and FY 1965
Estimates for OXCART and IDEALIST
REFERENCE : [REDACTED] Subject: FY 1964 Requirements
and FY 1965 Estimates

Attached are revised estimates for Programs OXCART and
IDEALIST for subject fiscal years and a replacement summary
sheet incorporating these revisions.

HERBERT SCOVILLE, JR.
Deputy Director
(Research)

Attachments: a/s
SIGNATURE RECOMMENDED:

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JHS:vh/OSA-Fin/13 June 1963

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13 June 1963

MEMORANDUM FOR: Deputy Director of Central Intelligence

SUBJECT : Procurement of Additional U-2 Aircraft

1. Having been enmeshed for several months now in the toils of the struggle to obtain additional U-2 aircraft to meet outstanding and anticipated overflight requirements, and having seen the lines firmly drawn by each side, I have just about reached the conclusion that in view of the finite limitation on available U-2 aircraft, neither party to the fray has a chance of winning if what each says is true.

2. The JCS paper detailing the requirements of SAC and AFSC for U-2 aircraft, written in response to Mr. Gilpatrick's request, appears to establish a need for more U-2's than they presently possess, especially if the Soviets resume atomic testing. Although not specifically stated in the abstract of the JCS paper sent the DCI by Mr. Gilpatrick, we understand the original JCS document showed a net deficit of seven aircraft. By our own admission we are at least two and possibly three aircraft short of what we need to meet our forthcoming community requirement for overflight of denied territory. Together then, if what is said is true, the Air Force and the Agency could profitably employ an additional number of about ten U-2's.

3. With this thought in mind, last Friday I got in touch with Kelly Johnson at Lockheed for a bit of "war-gaming" on the subject of additional U-2's, to see if this idea was workable and feasible in terms of dollars involved and the time envelope for deliveries as well. I found Kelly singularly receptive to my suggestion. The gist of what he said is as follows:

a. Kelly states that there is no technical problem involved in building more U-2's. The dies and machinery used in their building are all in storage under Agency control on the West Coast.

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Copy 7
Page Two

25X1

and a production line could readily be set up in existing LAC space at Burbank, since the California Division of LAC is on the verge of laying off up to 4,000 people with the end of the F-104 production program domestically, and this would free factory floor space that would be required.

b. Any new U-2's would be built to the design of the "improved model" which we possess, namely, the so-called U-2C, with bigger ducts, larger engine, slipper tanks, etc. In addition, Kelly stated that he would "clean up the aircraft" if he got such an order. Among the things he has in mind is adding 4 feet in length to the bird, in order to give us a larger pressurized area in the "Q Bay" region where the payload is carried. In this enlarged space he would locate all of the associated equipments we have been adding to the bird over the years, and which are now scattered around throughout the aircraft.

25X1

He would expect to enlarge the diameter of the fuselage at the same time, and this might give us an opportunity to fly with a turbofan engine such as the fan version of the J-57, more readily available in terms of lead time than the J-75 power plant now in our U-2's. The fan engine potentially offers better specific fuel consumption, more range thereby, more power per pound of engine and quite possibly a modest increment in altitude. Kelly did not wish to be held to any performance figures at this time, nor did he commit himself to the fan engine in the new bird, but I believe he will explore this and all other possibilities for improvement. At one time he told me that if he were given the chance to redesign the T-33, he could improve on its performance and safety by a wide margin on the basis of experience; I believe he would do the same on the U-2.

c. Kelly noted that he thought it less than economical to attempt to set up a production line for less than ten new aircraft. The larger the number ordered, the greater

NRO
25X1

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Copy 7
Page Three

possibility of a price break down-stream. When asked for a guesstimate on unit cost for an order of ten aircraft, Kelly came back with [REDACTED] each, less engines. Cameras, of course, would not be included in that cost either. Thus ten new birds would run in the neighborhood of [REDACTED]. I asked him to quote on new planes in increments of five - 10, 15 and 20, just to see what price break might be possible.

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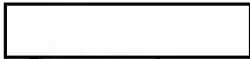
d. On the subject of deliveries, Kelly said he thought he could deliver the first aircraft "within eight months." Based on our original experience with the U-2, subsequent deliveries could be expected at approximately three week intervals, which could conceivably conclude the order within about 15 months, possibly less, knowing Kelly's drive and ability to beat his own schedule estimates.

e. Although we could not go into the matter on the phone, Kelly has an idea up his sleeve for a new camera system with the new U-2. It apparently centers around a 120-130 inch lens system, with what sounded like dual purpose use on the order of the Orbiting Astronomical Observatory idea - high resolution photography upwards from the aircraft (and possibly downward when required). Star observation might thus be your cover story. He said he would send us a proposal on this idea, along with his refined figures on new U-2's.

4. SUMMARY: It appears feasible and possible to produce an agreed quantity of new U-2's on a time span and at a cost that is apparently quite reasonable. Without final figures in hand, it is hard to give an outside ballpark figure for the total cost of ten new U-2's, complete with subsystems, cameras and engines, but unless we attempted totally new equipments for the new birds where development costs might skyrocket, I would wager that something on the order of [REDACTED] would turn the trick. In rough terms, this would be about the same as three DISCOVERER systems.

NRO
25X1

NRO
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Copy 1
Page Four

25X1

I also firmly believe that the Navy would be delighted to join in a production order for new U-2's, theirs of course with carrier adaptability, and that they would find the funds to support their part of any such total order for new aircraft and systems. It seems to me likely that they would come into the game for about five aircraft, which could give USAF and the Agency a decent price break in the bargain, and also make NRO a bit more representative of all-service interest than it is at the moment.

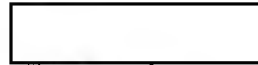
Any reorder of U-2's should include provisions for carrier use or an actual operating carrier capability. The day of available foreign staging bases is well nigh over and done with, and we delude ourselves to think otherwise.

People may ask "why build more U-2's with OXCART is right?" The answer here to my way of thinking is that there are many places in the world where vital intelligence is required where the U-2, with its extreme maneuverability, can get coverage in detail and vertically at that, in a single mission where OXCART would be an inappropriate system to use - something like smashing a fly with an 18 pound hammer. The Soviet Union is not our only problem area, and with the as yet nearly untapped field of ECM defenses against SAMs and interceptors, there are endless ways to keep the U-2 capability a vital one for years to come. In any event, I feel strongly that instead of beating each other to death with statistics, we and the DOD should take a good hard look at this suggestion now, while there is still time to make appropriate budgetary adjustments for FY-64. Lastly, I believe the Agency should carry its end of the financial burden on any new aircraft buy of this sort, not relying wholly on USAF or NRO funds, in order to ensure equitable distribution of new assets.


JAMES A. CUNNINGHAM, JR.
Deputy Assistant Director
(Special Activities)


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Page Five

25X1

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